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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,030	04/02/2004	Jozef J. Van Dun	43225-44575CUSC	2797
24238	7590	12/14/2004	EXAMINER	
JENKENS & GILCHRIST 1401 MCKINNEY SUITE 2600 HOUSTON, TX 77010			NUTTER, NATHAN M	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,030

Applicant(s)

VAN DUN ET AL.

Examiner

Nathan M. Nutter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-82 is/are pending in the application.
- 4a) Of the above claim(s) 81 and 82 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 55-80 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0404</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

Applicants are requested to amend in paragraph [01] the opening sentence of the Specification to include the status of "U.S. Serial Application No. 10/222,273" as now being "U.S. Patent No. 6,787,608."

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 55-80, drawn to a polyethylene blend composition, and articles produced therefrom, classified in class 525, subclasses 191 and 240.
- II. Claim 81, drawn to a "method of increasing the service life of a pipe", classified in class 525, subclasses 191 and 240, class 137, subclasses 803+ and class 138, subclasses 118 and 178.
- III. Claim 82, drawn to a polyethylene blend composition which includes different physical/chemical properties, classified in class 525, subclasses 191 and 240.

The inventions are distinct, each from the other because:

Inventions of Group I and of Group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the resin blends are defined in different terms having different parameters. As such, the separate inventions would have different effects and be used for different functions.

Inventions of Group I and of Group II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the method can be practiced with other known products, such as metals, and the product can be used in a materially different process, such as making pipe furniture, etc..

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Connie Pielech on 23 November 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 55-80. Affirmation of this election must be made by applicant in replying to this Office action. Claims 81 and 82 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 55-65, 72-75 and 78-80 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailey et al, newly cited.

The reference to Bailey et al teaches the manufacture of a "polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component and a high-molecular-weight (HMW) ethylene interpolymer component, wherein the LMW component is characterized as having a molecular weight distribution, MWD^L, of less than about 8" at Table 1 that bridges columns 1, 2, 3 and 4, as recited in

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instant claims 55, 57-65 and 78. The Table shows a HMW^L as being "2-4" as recited in claims 55 and 63. The blend is characterized as being bimodal at column 2 (lines 42-47), as recited in claim 56. In Table 1, the LMW component has a density of "about 0.945-0.975," as recited in claim 57, and an I₂ value of "45-300" g/10 min., embracing that recited in claim 58. In Table 1, the HMW component has a density of from "about 0.930-0.955," as recited in instant claim 59, a HLMI (I_{21.6}) value of "0.1-1.5," as recited in instant claim 60, and a MWD "generally preferred" as being "4-9, as recited in claims 61 and 64. The ratios of the weight average molecular weights of the HMW and LMW constituents embraces that recited in claim 62 at Table II at column 3. Again, in Table 1, the blend is characterized as having a MWD of "20-35," as recited in claims 65 and 78. The polymers are taught as being produced by a catalyst system as recited in claims 72-75. Note the Examples. Finally, the reference teaches the employment of these resins in manufacturing at column 2 (lines 33-41), as recited in instant claims 79 and 80.

Claims 55, 57-61, 63, 72, 73, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al, newly cited.

The reference to Martin et al teaches the manufacture of a "polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component and a high-molecular-weight (HMW) ethylene interpolymers component, wherein the LMW component is characterized as having a molecular weight distribution, MWD^L, of less than about 8" at the paragraph bridging column 1 to column 2 as recited in instant claims 55, 57, and 58. This passage teaches a "heterogeneity index (MWD^L)

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from 2 to 8," as recited in claims 55 and 63, and that the LMW component has a "density greater than 0.96," embracing that recited in claim 57, and an I_2 value of "greater than 30 grams per 10 minutes," embracing that recited in claim 58. Note Table I at columns 3 and 4. Further, in Table II at columns 3, 4, 5 and 6, the HMW component has a density of from "about 0.94-0.975," as recited in instant claim 59, a HLMI ($I_{21.6}$) value of "2-12," embracing that recited in instant claim 60, and a heterogeneity index that may equal 6, as recited in claim 61. The polymers are taught as being produced by a catalyst system as recited in claims 72 and 73. Note the Examples. Finally, the reference teaches the employment of these resins in manufacturing at column 1 (lines 21-31), as recited in instant claims 79 and 80.

Claims 55, 57, 59-64, 72-75 and 78-80 are rejected under 35 U.S.C. 102(b) as being anticipated by Rohde et al, newly cited.

The reference to Rohde et al teaches the manufacture of a "polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component and a high-molecular-weight (HMW) ethylene interpolymers component, wherein the LMW component is characterized as having a molecular weight distribution, MWD^L , of less than about 8." Note column 1 (lines 3-20), that teaches values that are overlapping at a polydispersity of 2.5 to 8, as recited in claim 55. Note column 2 (lines 45-56) for the density of the LMW ethylene homopolymer being 0.95 to 0.97 g/cm³, as recited in claim 57. Note column 3 (lines 23-32) which teaches the density of the HMW constituent to be "from 0.91 to 0.945 g/cm³" and "not greater than 0.950 g/cm³", both of

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which embrace the recitations in claims 59 and 61. At column 3 (lines 23-24) the patent teaches the MFR 190/21.6 of the HMW constituent to be "not greater than 1.5 g/10 min.," embracing that recited in claim 60. Note Tables 1 and 2 at columns 7 and 8 and claim 1 at column 9 that show the weight average molecular weights for both constituents, from which the ratios as recited in the instant claims 62-64 and 78 may be determined. The polymers are taught as being produced by a catalyst system as recited in claims 72-75. Note the Examples. Finally, the reference teaches the employment of these resins in manufacturing at column 1 (lines 41-57), as recited in instant claims 79 and 80.

Claims 55-57, 59-64, 66, 69, 72-74 and 77-80 are rejected under 35 U.S.C. 102(b) as being anticipated by de Lange et al, newly cited.

The reference to de Lange et al teaches the manufacture of a "polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component and a high-molecular-weight (HMW) ethylene interpolymers component, wherein the LMW component is characterized as having a molecular weight distribution, MWD^L , of less than about 8" at column 3 (lines 22-28) for the polydispersity of the LMW component being "from 2.5 to 12" embracing that recited in claims 55 and 63. The blend is taught as being bimodal at column 2 (lines 11-27). Note the paragraph bridging column 2 to column 3 for the LMW ethylene homopolymer to have "a density of from 0.94 to 0.97 g/cm³," as recited in claim 57. Note column 5 (lines 20 et seq.) for the density of the HMW component at "0.924 g/cm³," as recited in claim 59, and the

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polydispersity of the HMW component to be 6.8, as recited in claim 61, and at column 3 (lines 65-67) "from 1 to 10," as recited in claim 64. That passage also shows the weight average molecular weight, as recited in claim 66. The $I_{21.6}$ value for the HMW component is taught to be 0.8 g/10 min., as recited in claim 60. The ratios of the weight average molecular weights of the HMW and LMW constituents embraces that recited in claim 62 at column 5, (lines 20-27). Note the Table 1 bridging columns 5 and 6 for the $I_{21.6}$ value of the blend, as recited in claim 69. The polymers are taught as being produced by a catalyst system, as recited in claims 72-75. Note the Examples and column 6 (lines 9-11). Finally, the reference teaches the employment of these resins in manufacturing at the paragraph bridging column 1 to column 2, as recited in instant claims 79 and 80.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 55-75 and 78-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al, cited and for the reasons set out above.

The recitations in claims 65-71 regarding the manipulation of the compositional limitations of the comonomers would be within the skill of an artisan to employ desirous of end-product characteristics. Otherwise, since all other parameters appear to be

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equal, these recitations appear to be inherent in the composition as disclosed and taught by Bailey et al. as such, the instant claims are deemed to be obvious over the teachings of Bailey et al, absent any showing of unexpected results, as pertaining thereto.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).


Claims 55-80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 6,787,608. Although the conflicting claims are not identical, they are not patentably distinct from each other because the production of a blend that may embrace the patented blend would be within the skill of an artisan desirous of properties that may differ slightly in the final product.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

10 December 2004